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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,843	12/27/2001	Craig Dillon	13553-06830	9057
<div>7590 Glenn Patent Group 3475 Edison Way Suite L Menlo Park, CA 94025</div>				
			EXAMINER BLACK, LINH	
			ART UNIT 2163	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/032,843

Applicant(s)

DILLON ET AL.

Examiner

LINH BLACK

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2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 and 46-60 is/are pending in the application.
- 4a) Of the above claim(s) 44 and 45 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-33 is/are allowed.
- 6) ☒ Claim(s) 1-19, 34-43 and 46-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

This communication is in response to the Applicants' documents dated 4/9/07.

Claims 1-43 and 45-60 are present in the application. Claims 1, 20, 26, 34, 40 and 46 are independent claims.

Claim Objections

Claim 20 is objected to because of the following informalities: claim 20 is not amended or "currently amended". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 6-14, 16, 18-19, 34-38, 40-43, 46-55, 57, 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papierniak et al. (US 6128624), in view of Lazarus et al. (US 6430539).

As per claims 1 and 46-48, Papierniak et al. teach

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a source database comprising structured data – fig. 10, item 302 (web warehouse: the physical database); col. 14, lines 23-26; col. 15, lines 10-28 (web-warehouse's data is populated by data from web servers and web-based databases; web-warehouse's data is updated/augmented as data from web servers and web-based databases change etc...); col. 19, lines 59-63.

a reference database having reference data – fig. 13, item 376 (reference database); col. 20, lines 29-31.

a locator component configured to use the structured data to locate reference data in the reference database suitable for association with the source database – col. 2, 1st paragraph; col. 13, lines 8-36; col. 20, lines 1-37 (the source database/web warehouse/physical database is updated/augmented).

an analyzer component configured to process the reference data to extract the required data sets and correlate disparate data sets prior to populating/updating/augmenting the source data to form an augmented database (or updating the Web warehouse) – col. 17, lines 37-50 (interpret, analyze, translate, and refine the source data in order to extract the required data set,...correlate disparate data sets prior to populating Web Warehouse); col. 20, lines 19-31 (the structure and location of all source data required for the warehouse is defined via the reference database). Papierniak et.al. also teach description of the data – col. 20, line 49; data element descriptions for database tables or files – col. 21, lines 44;

a predictive modeling component configured to classify behavior with the augmented database – col. 5, lines 20-37; col. 18, line 65 to col. 19, line 32

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(Mining tools could establish system models such that predicting/forecasting 352 capabilities can be realized..., and customer behavior patterns); fig. 10, item 352.

a data mining component configured to conduct searches of data in the augmented database – col. 3, last paragraph; col. 12, last paragraph; fig. 10, item 350 (mining tools), item 302 (web warehouse: the physical database). a display for displaying the search results – fig. 4, item 112; col. 25, lines 10-16.

However, Papierniak et al. do not explicitly suggest the limitation descriptors. Lazarus et al. teach predictive modeling of consumer financial behavior – the title; analyzing and predicting consumer financial behavior...- col. 3, 1st paragraph; col. 4, lines 10-28; major and minor categories with associated descriptors – col. 9, line 55 to col. 10, line 11; fig. 3, item 302 (create/update merchant vectors), item 304 (segment merchant vectors); fig. 4a: items 417 (merchant segments database), item 416 (merchant vectors database), item 418 (predictive models). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching with Lazarus et al.'s teaching in order to allow the classification and analyzing of large number of data categories to effectively predict/forecast the behavior patterns of consumers etc...

As per claims 2 and 49, Papierniak et al. teach wherein the source database contains financial transaction data – col. 15, lines 47-56 (web warehouse and customers who pay fees); col. 16, lines 50-51; col. 17, lines 5-21.

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As per claim 6, Papierniak et al. teach

wherein the source database contains product inventories – col. 2, lines 34-43;
fig. 9: inventory; col. 4, lines 50-64; col. 18, lines 32-36.

and wherein the reference database contains information describing products –
fig. 13, items 302, 362-368, 376; col. 19, lines 55-63.

As per claim 7, Papierniak et al. teach

wherein the source database contains Internet browser view transactions – col.
8, lines 14-27; claim 1.

and wherein the reference database contains the Internet pages of the browser
view transactions – col. 20, lines 19-25.

As per claims 9, 36, 42, 50, Papierniak et al. teach

wherein the structured data comprises at least a name or identifier corresponding
to a merchant, product and/or service – col. 15, lines 47-60; claims 1, 19a .

As per claims 10, 51, Papierniak et al. teach

wherein the reference database contains data in an unstructured format – col.
12, lines 50-58.

As per claims 11, 35, 41, 52, Papierniak et al. teach

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wherein the reference database comprises a public database such as the Internet – fig. 13, items 376 and 368; col. 20, first paragraph.

As per claims 12-13, 37-38, 43, 53-54, Papierniak et al. teach wherein the locator component locates electronic pages on the Internet related to merchant, product and/or service identified of the structured data in the source database; wherein the locator component includes a spider module that searches for embedded links, keywords and/or references in the text found at the located electronic pages - col. 2, 1st and 2nd paragraphs; col. 13, lines 8-36; col. 20, lines 1-37.

As per claims 14, 55, Papierniak et al. teach wherein the locator component retrieves the natural language text from the located electronic pages - col. 2, 1st and 2nd paragraphs.

As per claims 16, 57, Papierniak et al. teach a locator component configured to use the structured data to locate reference data in the reference database suitable for association with the source database – col. 2, 1st paragraph; col. 13, lines 8-36; col. 20, lines 1-37. Papierniak et al. do not teach wherein the locator component validates the located electronic pages using zip code and/or Standard Industry Code (SIC) information stored in the source database.

Lazarus et al. teach predictive modeling of consumer financial behavior – the title; analyzing and predicting consumer financial behavior...- col. 3, 1st

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paragraph; col. 4, lines 10-28; major and minor categories with associated descriptors – col. 9, line 55 to col. 10, line 11; fig. 3, item 302 (create/update merchant vectors), item 304 (segment merchant vectors); fig. 4a: items 417 (merchant segments database), item 416 (merchant vectors database), item 418 (predictive models). Lazarus et al. also teach the locator component validates the located electronic pages using zip code and/or Standard Industry Code (SIC) information - col. 4, lines 10-37; col. 9, last paragraph to col. 10, 1st paragraph. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching with Lazarus et al.'s teaching in order to allow the classification and analyzing of large number of data categories to effectively predict/forecast the behavior patterns of consumers etc...

As per claims 18, 59, Papierniak et al. teach wherein the source database comprises account based transactional records and the analyzer component aggregates the data from the source database and its associated reference data by reference to an account field – col. 15, line 29 to col. 16, line 11.

As per claims 19, 60, Papierniak et al. do not suggest predictive statistical model built from known historic outcomes. Lazarus et al. teach each merchant segment is trained using consumer transaction data in selected past time periods to predict spending in subsequent time periods...model training - the abstract; col.

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4, lines 10-37. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching with Lazarus et al.'s teaching in order allow the data from reference database be delivered to the associated records in the source database for better forecasting market trends or customers' behaviors.

As per claims 34 and 40, Papierniak teaches reading a data record from the source database; searching the reference database for information describing the data record – col. 19, line 55 to col. 20, line 37; fig. 13, items 376, 362-368, 302; col. 24, lines 24-36. Papierniak et al. also teach description of the data – col. 20, line 49; data element descriptions for database tables or files – col. 21, lines 44; structure/augment and store the collected data: col. 13, lines 37-45. However, Papierniak et al. do not explicitly suggest the limitation “keyword description” or descriptor. Lazarus et al. teach predictive modeling of consumer financial behavior – the title; analyzing and predicting consumer financial behavior...- col. 3, 1st paragraph; col. 4, lines 10-28; major and minor categories with associated descriptors – col. 9, line 55 to col. 10, line 11; fig. 3, item 302 (create/update merchant vectors), item 304 (segment merchant vectors); fig. 4a: items 417 (merchant segments database), item 416 (merchant vectors database), item 418 (predictive models). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching with Lazarus et al.'s teaching in order to allow the classification based on keyword descriptions/descriptors and analyzing of large number of data

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categories to effectively predict/forecast the behavior patterns of consumers etc:...

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papierniak et al. (US 6128624), in view of Lazarus et al. (US 6430539), and further in view of Benson et al. (US 20020067821).

As per claim 3, Papierniak et al. teach it is a feature of the present invention to collect the data, efficiently store the data and/or provide useful marketing information indicative of events occurring on the web...to collect data which indicates where a user has been in prior sessions, and which may be useful in designing future products accessible via and for the web – col. 2, lines 57-65. However, Papierniak and Lazarus et al. do not suggest telephone call detail records in the source database and business indices and phone directories in the reference database. Benson teaches a database of customers calling records or call log database with directory paths and directory numbers – paragraphs 30, 34; each entry in the customer database has an index number...so that the monitor program can access the entry to retrieve the derived business information. – par. 37. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching, Lazarus et al.'s teaching with Benson's teaching in order to keep calling records where users/customers have reached and also using same or associated information from the Internet/reference database to update/augment a source

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database/web warehouse to better analyze and predict users/customers' behaviors.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papierniak et al. (US 6128624), in view of Lazarus et al. (US 6430539), and further in view of Barcelou (US 6048271).

As per claims 4-5, Papierniak teaches reference database collects data from internet/web system 368, business operations file descriptions and samples 366, environmental system, usage and operation data 364 etc... in fig. 13. Papierniak and Lazarus et al. do not suggest the source database contains investment transactions, insurance transactions, and retail transactions at an individual product level. However, it is well known in the art that transaction records related to these businesses are stored and/or backed up by associated business companies. In other words, the source database can contain any businesses' related records/data and keeps updating/augmenting the source database from Internet, World Wide Web or other related resources' changing/new data in order to store, analyze, and mining the data in the source database to forecast/predict the customers' behaviors or businesses' trends. Barcelou teaches a device may offer optional services including but not limited to full automated teller function, direct vending of foods, beverages, publications and other retail items, goods, or services such as mail order catalogue purchases, online service access, restaurant take-out orders, cruise or airline tickets, stock trading or other investment or banking services, health assessment and treatment services,

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pharmacy services including drug interaction databases,...Medicaid or insurance brokerage. Other services are limited only by the imagination – col. 3, lines 34-47. As data is received from external sources for input into the various areas of the reference database (Papierniak – col. 20, lines 22-25), and as the structure and location of all source data required for the warehouse is defined via the reference database (Papierniak – col. 20, lines 29-31), the reference database also contains associated data regarding investments, mutual funds, insurance, product information from catalogs etc... Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching, Lazarus et al.'s teaching with Barcelou's teaching in order to allow the storage, analyzing, and manipulating of data in different business environments to better serve users.

Claims 15, 17, 39, 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papierniak et al. (US 6128624), in view of Lazarus et al. (US 6430539), and further in view of Turney (US 6470307).

As per claims 15, 39, 56, Papierniak and Lazarus et al. do not teach wherein the processing of reference data in the reference database is accomplished by reducing the natural language text to a set of weighted keywords. Turney teaches reducing the natural language text to a set of weighted keywords – col. 2, lines 39-58; figs. 4-5. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching,

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Lazarus et al.'s teaching with Turney's teaching in order to facilitate data storing, searching, and retrieval.

As per claims 17, 58, Papierniak teaches a predictive modeling component configured to classify behavior with the augmented database – col. 5, lines 20-37; col. 18, line 65 to col. 19, line 32 (Mining tools could establish system models such that predicting/forecasting 352 capabilities can be realized..., and customer behavior patterns); fig. 10, item 352. Papierniak and Lazarus et al. do not teach wherein the predictive modeling module uses one or more of the following methodologies: model-based regression, non-parametric regression (e.g., neural networks), Bayesian inference, hidden Markov models, fuzzy logic models, evolutionary models, or decision trees. Turney teaches reducing the natural language text to a set of weighted keywords, weights for the criteria are determined by a step of training, and weights may be stored in a decision tree in the process of generating keywords from stored documents - col. 2, lines 39-58; figs. 4-5. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Papierniak et al.'s teaching, Lazarus et al.'s teaching with Turney's teaching in order to allow mining components to utilize information provided in associating with keywords in order to facilitate the forecasting process for market trends.

Allowable Subject Matter

Claims 20-33 are allowed.

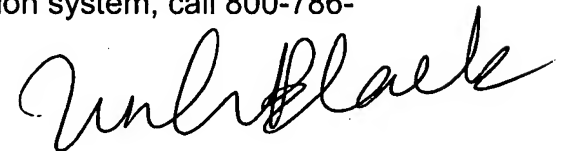
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LINH BLACK
Examiner
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